

REMARKS

Reconsideration of the above-identified application, as amended, is respectfully requested.

In the Official Action dated November 30, 2004, the Examiner rejected Claims 19-20 and 22-29 under 35 U.S.C. §102(b) as being anticipated by Bloomberg (U.S. Patent No. 5,761,686)(hereinafter "Bloomberg"). Claim 21 is further rejected under 35 U.S.C. §103(a) as being unpatentable over Bloomberg in view of Abe (U.S. Patent No. 6,580,804).

With respect to the rejection of independent Claim 19 as being anticipated by Bloomberg, applicants respectfully disagree in view of the amendments to the Claim 19 provided herein.

Specifically, Claim 19 is being amended to set forth that the embedded additional watermark information is provided into the data representing text information in a manner that is not visually recognizable by human perception. Respectfully, no new matter is being added in this amended Claim 19 as full support is provided, for example, in the technical Field paragraph (pg. 1, lines 10-14) and especially in view of Figure 5, which illustrates the original black and white image document (Figure 5(a)) as compared to the same image having the embedded additional watermark information provided into the data representing text information as shown in Figures 5(b) and 5(c) which show the embedded information (respectively bits 1 and 0) in each watermarked line that are visually imperceptible when compared to the original image (Fig. 5(a)).

Clearly this is not taught nor suggested by Bloomberg which is actually directed to a data encoding technique and not a digital watermarking embedding technique. Bloomberg rather,

performs a mapping of the binary data representing an original text area to be encoded in a manner that is visually recognizable, i.e., the original text of the original image is obscured, as shown in the comparison of Figure 2 of Bloomberg showing an original image (element 10), and an iconic (encoded and reduced) version of the image (element 20) which Bloomberg system generates, with the text essentially encoded into groups of bits so that the original text appears imperceptible. This is especially shown in Figure 8 where the original text image has been encoded in encoded data blocks—basically, a sequence of encoded data “blocks” having certain appearance characteristics (e.g., foreground color, interblock spacing, horizontal spacing relative to a baseline, etc.) that vary according to the application in which the iconic (i.e., encoded and reduced) image is being used. Bloomberg at col. 11, lines 27 et seq., explain the various embodiments of the binary encoding of the original text image or “mapping” being performed by Bloomberg. All these display features in Bloomberg representing the encoded image are perceptible because the encoding information is not embedded into the data representing the text information. Rather, as mentioned in Bloomberg, the original image binary data is mapped (encoded) (see Figure 13 elements 84-86 and 87-89 of Bloomberg) to generate new lines of data “blocks” having certain appearance characteristics (see output image lines 86 and 89 of Figure 14 and all of Fig. 15 of Bloomberg) such that the resultant encoding is visually perceptible by humans, i.e., the mapping is performed such that the textual information of the original image is not preserved.

The fact that Bloomberg is not a watermarking technique but a data encoding technique (the word “watermark” only being mentioned once in connection with the prior art (Bloomberg, col. 2, lines 40)) Bloomberg can not be anticipatory and the Examiner is respectfully requested to withdraw the rejection of Claim 19 based on 35 U.S.C. §102(b). By

virtue of their dependency, the Examiner is respectfully requested to withdraw the rejections of Claims 20 and 22-29.

Applicant further takes this opportunity to add a new dependent Claim 30 which sets forth the feature that the modified extracted features used for embedding additional watermarking information into data representing text information are statistically constant as compared to a state of no embedded watermarking to increase likelihood of detecting the watermarking information.

This is the feature that basically supports the limitation added to Claim 19 that the embedded additional watermark information is provided into the data representing text information in a manner that is not visually recognizable by human perception as characteristic of watermarked images. Respectfully no new matter is being added as full support is found in the specification, e.g., see page 11, lines 14-19, and, the table bridging pages 14 and 15, especially where it is shown that the standard deviation values for the watermark embedded data states are not significantly different from the standard deviation value of the image having no embedded watermark thereby decreasing possibility of human visual perception, yet enabling stable detection of the watermark (See specification page 14, lines 13-18).

Accordingly, new Claim 30 is patentably distinct and neither taught nor suggested by Bloomberg.

This application is now believed to be in condition for allowance, and a Notice of Allowance is respectfully requested. If the Examiner believes a telephone conference might expedite prosecution of this case, it is respectfully requested that he call applicant's attorney at (516) 742-4343.

Respectfully submitted,



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